MIL-T-5544B
24 FEBRUARY 1964
SUPERSEDING
MIL-T-5544A(ASG)
30 MARCH 1954

MILITARY SPECIFICATION

THREAD COMPOUND, ANTISEIZE, GRAPHITE-PETROLATUM

This specification has been approved by the Department of Defense and is mandatory for use by the Departments of the Army, the Navy, and the Air Force.

1. SCOPE

1.1 This specification presents requirements for one type of graphite antiseize compound identified by NATO symbol S-720 (see 6.3).

2. APPLICABLE DOCUMENTS

2.1 The following documents, of the issue in effect on date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein:

SPECIFICATIONS

FEDERAL

SS-G-659—Graphite; Lubricating, Flake.
VV-P-236—Petrolatum, Technical.
PPP-B-636—Box, Fiberboard.
PPP-C-96—Cans, Metal, 28 Gage and Lighter.

STANDARDS

FEDERAL

Fed. Test. Method Std. No. 791—Lubricants, Liquid Fuels, and Related Products; Method of Testing.

MILITARY

MIL-STD-105—Sampling Procedures and Tables for Inspection by Attributes.
MIL-STD-129—Marking for Shipment and Storage.

(Copies of specifications, standards, drawings, and publications required by suppliers in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

2.2 Other publications. The following document forms a part of this specification to the extent specified herein. Unless otherwise indicated, the issue in effect on date of invitation for bids or request for proposal shall apply:

AMERICAN SOCIETY FOR TESTING AND MATERIALS

ASTM D217T—Cone Penetration of Lubricating Grease.

(Copies of ASTM publications may be obtained from the American Society for Testing and Materials, 1916 Race Street, Philadelphia 3, Pa.)

3. REQUIREMENTS

3.1 Composition. The physical composition of the thread compound shall be as specified in table I.

TABLE I. *Physical composition*

Ingredient	Percent by weight (min)	Percent by weight (max)
Petrolatum	48	52.
Graphite	Balance	Balance.

3.2 Unless otherwise specified in the contract or order, no data are required by this specification or any of the documents referenced in section 2 herein (see 6.2).

3.3 Properties.

3.3.1 *Ingredient materials.*

3.3.1.1 *Petrolatum.* The petrolatum shall conform to Specification VV-P-236.

3.3.1.2 *Graphite.* The graphite shall conform to SS-G-659 with respect to graphitic carbon and ash content, and percent adulterants. No residue shall be retained on a 100-mesh screen; not more than 2.0 percent shall be retained on a 200-mesh screen.

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3.3.2 *Thread compound.*

3.3.2.1 *Penetration.* The worked penetration of the thread compound shall be not less than 170 nor more than 260 when tested as specified in 4.3.1.

3.3.2.2 *Stability.* The thread compound shall show no separation when tested as specified in 4.3.2.

3.4 Workmanship. The compound shall be free from cakes or lumps and hard, gritty particles. There shall be no separation of the mixture.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified, the supplier may utilize his own facilities or any commercial laboratory acceptable to the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

4.2 Quality conformance inspections.

4.2.1 Inspection requirements shall be in accordance with Method 9601 of Fed. Test. Method Std. No. 791.

4.2.2 *Sampling.*

4.2.2.1 *Inspection lot.* A lot shall consist of 500 pounds or less of compound manufactured at one time from one batch of compound offered for delivery at one time.

4.2.2.2 *Sampling for inspection of filled containers.* A random sample of filled containers shall be selected in accordance with MIL–STD–105 at inspection level I and acceptance quality level (AQL) of 2.5 percent defective to verify compliance with this specification in regard to fill, closure, marking, and other requirements not involving tests.

4.2.2.3 *Sampling for tests.* From each inspection lot a 1-pound sample of the compound shall be selected at random in accordance with Method 8001 of Fed. Test. Method Std. No. 791 and subjected to the tests specified in 4.3.

4.2.3 *Examination of filled containers and preparation for delivery requirements.* Each sample selected in accordance with 4.2.2.2 shall be visually examined for appearance of the compound (see 3.4), for defects of construction of the container and the closure, for evidence of leakage, for unsatisfactory markings, and all other preparation for delivery requirements of section 5. Each sample filled container shall also be weighed to determine the amount of contents. Any container in the sample having one or more defects, or under the required fill, shall be rejected, and if the number of defective containers in any sample exceeds the acceptance number for the specified sampling plan of MIL–STD–105, the lot represented by the sample shall be rejected.

4.3 Tests.

4.3.1 *Penetration.* The normal worked penetration of the thread compound shall be determined in accordance with Method 311 of Fed. Test. Method Std. No. 791 (ASTM D217T).

4.3.2 *Stability.* The stability of the thread compound shall be determined by placing 100 grams of the compound in each of the two cone-shaped centrifuge tubes, and centrifuging at 1,500 rpm for ½ hour. The apparatus to be used for this test is described in Method 3003 of Fed. Test. Method Std. No. 791. Separation shall be defined as droplets or layer of oil appearing on the surface of the compound after centrifuging.

4.3.3 *Rejection.* Failure of any sample selected in accordance with 4.2.2.3 to pass any of the tests of 4.3 shall be cause for rejection of the lot represented.

5. PREPARATION FOR DELIVERY

5.1 Packaging. Packaging shall be level A or C, as specified (see 6.2).

5.1.1 *Level A.* Thread compound shall be packaged in cans conforming to PPP–C–96, type V, class 2, round.

5.1.2 *Level C.* Thread compound shall be packaged in accordance with the manufacturer's commercial practice.

5.2 Packing. Packing shall be level A, B, or C as specified (see 6.2).

5.2.1 *Level A.* Thread compound shall be packed 48 (1-pound cans) in boxes conforming to PPP–B–636, type I, class 2, grade 3, 5, or 6.

5.2.2 *Level B.* Thread compound shall be packed 48 (1-pound cans) in boxes conforming to PPP–B–636, domestic type.

5.2.3 *Level C.* Thread compound packaged as specified in 5.1 shall be packed in a manner to insure carrier's acceptance and safe delivery to destination. Containers shall be in accordance with rules and regulations of carriers applicable to the mode of transportation.

5.3 **Marking, precautionary.** The following markings shall appear on each package and shipping container:

DANGER: THIS MATERIAL IS AN ELECTRICAL CONDUCTOR. APPLY LIGHT COATING TO LOWER SPARK PLUG THREADS ONLY. MATERIAL MUST NOT COME IN CONTACT WITH SPARK PLUG TERMINAL OR ELECTRODES. DO NOT USE IN OXYGEN SYSTEMS—EXPLOSION MAY RESULT.

5.3.1 In addition to special marking required, unit and shipping containers shall be marked in accordance with Standard MIL-STD-129.

6. NOTES

6.1 **Intended use.** This compound is particularly suitable for use on aircraft engine spark plugs and threaded fasteners and fittings. It should not be used in lieu of Antiseize Compound, White Lead Base, General Purpose (for Threaded Fittings) conforming to TT-A-580.

6.2 **Ordering data.** Procurement documents should specify:

(a) Title, number, and date of this specification.

(b) Data requirements, if any (see 3.2).

(c) Applicable levels of packaging and packing (see 5.1 and 5.2).

6.2.1 The material will be purchased by weight, the unit being 1 pound.

6.3 Certain provisions of this specification are the subject of international standardization agreements (ABC Air Standard 15/1 and NATO STANAG 3437). When amendment, revision, or cancellation of this specification is proposed, the departmental custodians will inform their respective Departmental Standardization Offices so that appropriate action may be taken respecting the international agreement concerned.

Custodians:
Army—MR
Navy—Weps
Air Force—RTD (11)
International interest (see 6.3)
Reviewer activity:
Army—MR
WC
MI
Navy—Weps
Air Force—
User activity:
Navy—Ships
MC
Preparing activity:
Air Force—RTD (11)
Project No. 8030-0119

Review/user information is current as of the date of this document. For future coordination of changes to this document, draft circulation should be based on the information in the current *DoD Index of Specifications and Standards.*

DPM 376 Lubricant, Antiseize

BRAY OIL COMPANY
1925 NORTH MARIANNA AVENUE
LOS ANGELES, CALIFORNIA 90032
(213) 268-6171

CABLE ADDRESS
BRAYOIL LOSANGELES

November 18, 1977

Mr. M. J. Veneroso,
Dept. C1-726 (52-11)
Materials Handling & Packaging Engineering
Douglas Aircraft Company
3855 Lakewood Boulevard
Long Beach, CA 90846

Dear Mr. Veneroso:

We received your letter requesting information on material regulations on our products. We are sending you Safety Data Sheets on the products. The only products that would be regulated are:

BRAYCOTE 103 - IATA Article No. 1939 — DPM 607
Flash Point, Tag closed cup, 100°F

BRAYCOTE 137 - IATA Article No. 1939o — DPM 5573
Flash Point, Tag closed cup, 105 F

If you need any further information, please contact us.

Yours very truly,

BRAY OIL COMPANY, INC.

Mike Slaby

Mike Slaby

MS:cmw

Encls.